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## MATERIAL TRANSPORT METHOD

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### ABSTRACT OF THE DISCLOSURE

A controlled material transport method for  
10 carrying materials to and from workstations, test  
equipment, and processing and assembly tools in a  
common facility. The present invention includes a  
rigid "robot vehicle" mountable to a passive track  
system, which can be routed to service all processing  
15 tools on the factory floor. The robot vehicle includes  
a hoist assembly and gripper assembly, which together  
perform such functions as picking up magazines, placing  
magazines, and loading magazines into the processing  
tools. The hoist assembly is capable of functioning in  
20 an operational envelope, which includes any target  
location within a 3-axis Cartesian coordinate system,  
to the extent of the range of motion of the hoist  
assembly. The hoist assembly also provides rigid and  
controlled z-axis travel, while being compact when  
25 retracted. The gripper assembly facilitates loading of  
the magazines, especially chute style magazines, which  
are commonly found on many existing processing tools.